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To: Jennifer Sarnecki
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A weekly newsletter from the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE). The EERE Network News is also available on the Web at: www.eere.energy.gov/news/enn.cfm

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News and Events

DOE Picks 20 Teams to Compete in the 2011 Solar Decathlon

Team Germany's house won the 2009 Solar Decathlon. *Credit:* Jim Tetro, DOE Solar Decathlon

DOE announced on April 15 the 20 collegiate teams selected to compete in the next Solar Decathlon, which will be held on the National Mall in Washington, D.C., in fall 2011. For two weeks, teams of college and university students from across the United States and around the world will compete to build and operate the most affordable, attractive, effective, and energy-efficient solar-powered houses. Hosted by DOE, the competition will highlight affordable homes that combine energy-efficient construction and appliances with renewable energy systems that are available today. Teams generally design and partially build their solar homes on or near their campus, then ship the homes by truck (and sometimes by barge) to the National Mall, where the teams have a limited number of days to finish construction. The teams then open their homes to the public while they compete in 10 contests.

The selected teams and their projects represent a diverse range of design approaches, building technologies, and geographic locations, including urban, suburban, and rural settings. The teams include colleges and universities from 14

U.S. states, including California, Florida, Hawaii, Illinois, Indiana, Maryland, Massachusetts, New Jersey, New York, North Carolina, Ohio, Tennessee, Vermont, and Virginia. Four international teams are also participating, including a team from Canada and teams from three countries that are new to the competition: Belgium, China, and New Zealand. In fact, the 2011 competition will feature a lot of new faces, as the only returning teams from the 2009 competition will be from Ohio State University, the University of Illinois at Urbana-Champaign, and the University of Calgary (part of a larger "Team Alberta" in 2009, but competing on its own in 2011). The international teams and the teams from California and Hawaii will face special challenges in bringing their solar homes to the National Mall, but the German team that won in 2007 and 2009 can attest to the fact that those challenges can be overcome.

Applications for the 2011 competition were evaluated by a panel of engineers, scientists, and experts from DOE's National Renewable Energy Laboratory. Teams were required to meet specific criteria to demonstrate their viability, including their ability to design and build an innovative, entirely solar-powered house; to raise additional funds; to support the project through a well-integrated curriculum; and to assemble the team necessary to carry the project through to completion. In addition, a panel of professionals from the American Institute of Architects, the National Association of Home Builders, the U.S. Green Building Council, building industry media, and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers evaluated conceptual designs from prospective teams. The results of their evaluations, combined with scores based on the four criteria listed above, determined the 2011 Solar Decathlon teams. For more information about the teams and their conceptual designs, see the DOE press release and the newly revised Solar Decathlon Web site.

DOE to Help Develop Clean Energy in Latin America and the Caribbean

DOE announced on April 15 a series of new partnerships and other initiatives to advance clean energy and energy security in the Western Hemisphere as part of the Energy and Climate Partnership of the Americas (ECPA). The new clean energy projects include launching an Energy Innovation Center for Latin America and the Caribbean, exploring the potential of a Caribbean-wide electrical transmission system, developing biomass resources in Columbia, and cooperating with Argentina on clean energy technologies. DOE will also host an earthquake preparedness workshop for the region's leaders.

DOE and the Inter-American Development Bank (IDB), the largest source of development funding for Latin America and the Caribbean, signed an agreement creating an Energy Innovation Center, the latest in a series of Regional Clean Energy Centers located throughout the hemisphere. Staffed by some of the world's leading experts in renewable energy and energy efficiency, including both DOE and IDB employees, the new center will serve as a focal point for clean energy project development and financing in the region. It will be able to access the IDB's financing pipeline for renewable energy and climate-related projects, which the IDB intends to increase to $3 billion per year by 2012. Among the proposed projects is the development of a new energy infrastructure in Haiti to help the country harness its wind, solar, and hydroelectric power potential. See the IDB press release.

DOE will also provide technical assistance to the Caribbean Sustainable Energy Working Group, starting with a workshop to explore the potential for a Caribbean-wide transmission system that will help tap the region's renewable energy resources. And under DOE's Low Carbon Communities of the Americas initiative, DOE and experts from its national laboratories will partner with scientists and technology experts in Columbia to develop a plan to produce heat and power from sugarcane and palm residues. In addition, DOE signed a Memorandum of Understanding with Argentina to promote cooperation on clean energy technologies.

ECPA was launched in 2009 during the Fifth Summit of the Americas, when President Obama and Western Hemisphere leaders committed to expand energy and climate cooperation in the hemisphere as part of a joint effort to ensure economic growth and prosperity. The ECPA is focused on developing clean energy resources, increasing energy security, and reducing energy poverty. The latest round of activity occurred as energy ministers and delegations from 32 countries gathered at the IDB in Washington, D.C., for the Energy and Climate Ministerial of the Americas, which was held on April 15 and 16. Energy officials joined with more than 200 businesses and non-governmental organizations to advance initiatives under the ECPA that will help countries across the hemisphere develop and deploy clean energy technologies and achieve economic growth without significantly increasing their carbon emissions. See the DOE press release.

DOE Issues Guidance for Reducing Petroleum Use in Federal Fleets

DOE released on April 14 its Federal Fleet Management Guidance, the first comprehensive guidance document to address the environmental impact of the federal vehicles. It will help agencies develop strategies to reduce their petroleum use and greenhouse gas (GHG) emissions, meeting a requirement of President Obama's Executive Order on Federal Leadership in Environmental, Energy and Economic Performance. The fleet guidance highlights a number of ways federal agencies can reduce petroleum consumption by reducing vehicle miles traveled, increasing fleet fuel efficiency, and switching to alternative fuels with lower GHG emissions. The document calls for federal agencies to optimize the size of both their fleets and the vehicles that make up those fleets, encourage transit options such as bicycling, and purchase alternative fuel vehicles, including electric and plug-in hybrid electric vehicles. The guidance also provides federal agencies with methods to track petroleum reductions and alternative fuel use.

On October 5, 2009, the president signed Executive Order 13514, calling on federal agencies to reduce petroleum fuel use by 2% each year from 2005 through 2020, for a total 30% reduction. Agencies will be accountable for meeting these goals and are required to annually report on their progress and make adjustments as necessary. Each vehicle purchase must demonstrate how it helps support the agency's mission and sustainability targets. The new guidance follows the General Service Administration's recently announced plans to double the federal hybrid fleet this year and to buy about 100 plug-in hybrid vehicles in 2011. See the DOE press release, the Federal Fleet Management Guidance (PDF 755 KB), and a summary of Executive Order 13514 from DOE's Federal Energy Management Program. Download Adobe Reader.

DOE and EPA Announce Changes to Bolster the Energy Star Program

DOE and the U.S. Environmental Protection Agency (EPA) jointly announced changes to the Energy Star product certification process on April 14 to ensure that only products meeting Energy Star energy efficiency requirements can receive the label. Effective immediately, manufacturers wishing to qualify their products for the Energy Star must submit complete lab reports and results for review and approval by EPA prior to labeling. EPA has strengthened its approval systems and is no longer relying on an automated approval process, and all new qualification applications will be reviewed and approved individually by EPA. These changes accelerate steps DOE and EPA have initiated over the past several months to bolster the verification, testing, and enforcement aspects of the Energy Star program.

The certification process will further be strengthened at the end of the year when all manufacturers must submit test results from an approved, accredited lab for any product seeking the Energy Star label. Testing in an accredited lab is currently required for certain product categories, including windows, doors, skylights, and compact fluorescent lighting, but the new process will extend the requirement to each of the more than 60 eligible product categories under the Energy Star program. These efforts are in addition to enforcement and testing procedures already in place to ensure compliance with the Energy Star specifications. DOE is conducting off-the-shelf product testing for some of the most common household appliances, and a recent Inspector General audit found that 98% of products tested fully complied with the Energy Star requirements. See the DOE press release and the Energy Star Web site.

U.S. Fish and Wildlife Service Offers Wind Turbine Siting Guidelines

A new set of guidelines will help wind power developers assess the environmental impact of their projects. *Credit:* Todd Spink

The U.S. Fish and Wildlife Service (FWS) sent a set of final recommendations on how to minimize the impacts of land-based wind farms on wildlife and habitats to Secretary of the Interior Ken Salazar on April 13. The proposed siting and operational guidelines by the 22-member Wind Turbine Guidelines Federal Advisory Committee include a science-based "tiered" process that corresponds to the stage of development of each wind power project, ranging from preliminary assessments to post-construction impact studies. The process is intended to assist developers in assessing the environmental footprint of their projects. The recommendations also call for meaningful incentives for developers that voluntarily adopt the tiered approach and cooperate with the FWS while advancing their projects. The advisory committee includes representatives from federal, state, and tribal governments, as well as wildlife conservation organizations and the wind power industry.

The advisory committee recommended that the Interior Department assess all forms of environmental stressors to birds and wildlife, such as climate change, when making policy decisions. The committee also called for stakeholders at the federal, state, and tribal levels to develop a national research plan designed to reduce the negative effects on wildlife while allowing further wind energy development. Secretary Salazar will review the recommendations and then direct

the FWS to write turbine siting guidelines for public and private lands. See the FWS press release (PDF 48 KB) and the advisory committee recommendations (PDF 1.43 MB). Download Adobe Reader.

Site News

DOE Marks Earth Day with New Online Resources for Clean Energy

The 40th anniversary of Earth Day arrives on April 22, and DOE is marking this momentous occasion with several new online features. The Web site for DOE's Office of Energy Efficiency and Renewable Energy (EERE) now includes an "Earth Day 2010" Web page that presents ideas for making every day Earth Day, with energy-saving tips provided through Web sites, a blog, and a widget. There's even an online poll asking how you'll celebrate Earth Day. That site also links to a special DOE Web page that features interactive animations on the current and future sources of electricity for the United States and on the ways to save energy and use renewable energy in your home and your community. For a limited time, this Web page is serving as the DOE home page. See the Earth Day 2010 Web page on the EERE Web site and the interactive animations on the DOE Web site.

President Obama joined the movement with his own call for people throughout the United States to participate in Earth Day activities. "As we continue to tackle our environmental challenges, it's clear that change won't come from Washington alone," said the president in an online video, "it will come from Americans across the country who take steps in their own homes and their own communities to make that change happen. That's why, as we get ready to celebrate the 40th anniversary of Earth Day, I want to leave you with a challenge: I want you to take action in your home or your community, at your school or your business, to improve our environment. It can be as simple as riding the bus or the subway to work, making your home more energy efficient, or organizing your neighbors to clean up a nearby park." The president also asked Americans to share their stories about how they are improving the environment. See the president's video, find ways to get involved, and share your stories on the White House Earth Day Web page.

Energy Connections

Report Examines Ways to Monitor and Verify Greenhouse Gas Emissions

The world has yet to reach a binding international agreement on climate change to succeed the Kyoto Protocol, but a new report from the National Research Council (NRC) has already looked at how independent data may be used to verify the greenhouse gas (GHG) emissions reported by countries. As noted by the new report, developed countries can generally estimate their GHG emissions fairly accurately just by keeping track of their fossil-fuel consumption and calculating the resulting carbon dioxide emissions. Tracking emissions of other industrial gases that contribute to climate change yields a more precise estimate. But for developing countries, deforestation and agricultural land-use changes may

contribute significantly to the GHG emissions, and these sources are harder to track and tally.

The NRC report concludes that developing countries will need financial and technical assistance to build an ongoing capacity to collect, analyze, and report GHG emissions, although the investment needed may be relatively small. The report estimates that significant improvements in the accuracy of emissions reporting from the 10 highest-emitting developing countries would require an investment of only $11 million over five years. The report also calls for independent verification of fossil-fuel use and of actual emissions, including ground-based monitoring systems near cities and other large emission sources. Ground-based monitoring stations could also measure the isotope carbon-14 to distinguish between biomass and fossil-fuel emissions. Such measurements would need to be combined with improved models of how GHGs circulate in the atmosphere.

Taking to the skies, the report notes that high-resolution satellite imagery can be used to estimate deforestation, the growth of new forests, and agricultural land-use changes. Such monitoring would ideally be combined with an improved understanding of how such land-use changes affect emissions of carbon dioxide, nitrous oxide, and methane. The report also calls for the National Aeronautics and Space Administration to build and launch a replacement for the Orbiting Carbon Observatory, which failed at launch in February 2009. Such an observatory could monitor carbon dioxide emissions from cities and power plants and attribute them to individual countries. As noted by the NRC, no other satellite has the same critical combination of abilities, including high precision, a small footprint, and an ability to sense carbon dioxide concentrations near Earth's surface. See the press release from the National Academies and the full report.

This newsletter is funded by DOE's Office of Energy Efficiency and Renewable Energy (EERE) and is also available on the EERE Web site. If you have questions or comments about this newsletter, please contact the editor, Kevin Eber.